California Regional Water Quality Control Board
Central Valley, Lahontan, North Coast Regions

Linda S. Adams
Secretary for Environmental Protection

http://www.waterboards.ca.gov/centralvalley
http://www.waterboards.ca.gov/lahontan
http://www.waterboards.ca.gov/northcoast

Arnold Schwarzenegger
Governor

NOV 14 2006

Bernie Weingardt
Regional Forester, Pacific Southwest Region
United States Forest Service
1323 Club Drive
Vallejo, CA 94592

MANAGEMENT AGENCY AGREEMENT WITH THE UNITED STATES FOREST SERVICE – BEST MANAGEMENT PRACTICE EVALUATION PROGRAM

This letter is to provide comments and suggestions regarding the United States Forest Service's (Forest Service) Best Management Practices Evaluation Program (BMPEP) for California. The Forest Service uses the BMPEP to evaluate the implementation and effectiveness of management measures for the prevention of nonpoint source water pollution. These comments are primarily in response to our review of the BMPEP publication titled "BMPEP 1992-2002 Monitoring Results" dated November 2004 (hereinafter referred to as the Report).

We support the BMPEP program, and appreciate the Forest Service staff time and effort expended in developing and evaluating the BMPEP over time. The BMPEP provides very useful information on the rates of implementation and effectiveness of the various management practices that are incorporated into project design on Forest Service lands throughout California, and it has successfully identified areas where the Forest Service is making good progress and where implementation and effectiveness need to be improved. The intent of this letter is to articulate both our strong support for the BMPEP program and to identify some areas where improvement is needed to achieve our mutual objective of ensuring and documenting that Forest Service projects comply with State water quality requirements.

The following are our comments and suggestions:

1. **Peer review.** The Report indicates that Dr. Lee MacDonald of Colorado State University, Fort Collins, conducted a peer review of the program. The Report does not state whether this peer review was conducted independently by Dr. MacDonald, or by a panel. It is also not clear what connection to the Forest Service each peer reviewer may have had. Additionally, the peer review result were not presented nor was there any indication as to if the Report or the BMPEP was modified in response to the review.

Peer reviews of large monitoring programs (such as the BMPEP) are normally conducted by external scientific experts who have no economic or administrative connection to the agency. For example, the State Water Resources Control Board's (State Water Board) Surface Water Ambient Monitoring Program undergoes a comprehensive peer-review every three years, by a panel of independent external scientists who have no economic or administrative connection to the Water Boards. As this is standard practice for large monitoring programs, we feel that the BMPEP should be similarly peer-reviewed. Peer review often results in improvements to the program, and allows all interested parties to be assured that the program has been reviewed and evaluated by independent external experts. It is our hope that you will commit to such peer review for the BMPEP program.

Also, we would be interested to read the results of the peer review and how the Forest Service responded to the review.

2. **Visual observations vs. instream condition.** The BMPEP relies on "visual" observations; there is no instream component to document whether the approximately 80% "visual" implementation and effectiveness rates equate to compliance with State water quality standards. While implementation of effective management measures is a critical step in minimizing the adverse effect of non-point source pollution on waster quality, implementation is not a guarantee that water quality standards are being achieved. In short, the BMPEP is not currently designed to answer the question of whether State water quality standards are being met, and therefore cannot answer that question. We strongly recommend that the Forest Service propose an in stream (validation) component, and have it peer reviewed prior to implementation.

3. **Qualifications of BMPEP personnel.** The Report does not specify who conducted the visual observations. We recommend that all BMPEP observations be conducted by watershed (i.e., soils, hydrology) personnel with the academic background to evaluate erosion and water quality impacts. It is our understanding that some BMPEP observations were made by personnel who do not have academic backgrounds in soils/hydrology, and that some projects are "self-evaluated" by persons who were responsible for project planning and/or implementation. We recommend that the BMPEP be re-structured (if this has not already been done) to require that all BMPEP observations be made by independent soil/water specialists (i.e., watershed specialists) who were not associated with the planning or implementation of the project being evaluated. This is necessary to reduce bias and to ensure objectivity of the results.

4. **Updated BMP lists for non-timber activities.** Many of the Water Boards have created Non-Point Source Units within each office. The Non-Point Source Units will be evaluating grazing, recreation, and mining activities within the respective regions, in addition to focusing on timber harvesting issues. The Report mentions that the BMPEP program evaluates these programs as well. It also states that

the evaluation protocols for grazing and mining activities are being updated to provide for a quantitative measure of best management practices (BMP) implementation and effectiveness that is compatible with the Forest Service's internal database that tracks implementation and effectiveness for other activities. However we have not received updated BMP lists for these activities, or been invited to collaborate on the development/update of BMPs as contemplated in the Management Agency Agreement (MAA) between the Forest Service and the State Water Board. Please provide the Water Boards current information on this topic.

5. **Tracking whether water quality protection measures contained in planning documents are incorporated into final implementation/sale contracts.** The Report acknowledges that all water quality protection measures identified in the planning process are not always included in the contract documents that the implementing party uses as a scope of work. Water Board staff have encountered numerous occasions where this failure has lead to water quality problems.

   As an example, in summer 2003, Water Board staff inspected the Pioneer Fuels Hazard Reduction Project in the Lake Tahoe Basin. After a major summer thunderstorm Water Board staff observed that sediment had run off from the site and down a road for approximately one mile, eventually accumulating in a stream environment zone. There were very few BMPs in place at the time of the violation, and when alerted to the problem, the on-site project manager was unaware of mitigation requirements that were listed in environmental planning documents. Several follow-up visits were conducted by Water Board staff to ensure that appropriate BMPs were implemented and for the purpose of educating Forest Service personnel and contractors on various BMP technologies. The Forest Service and its contractor were responsive and BMPs were eventually installed throughout the site.

   This example highlights not only the issue of ensuring that planning document mitigation measures are incorporated into implementation contracts but also identifies the importance of training Forest Service personnel (and contractors) about the need for BMPs and the current practices. Such awareness would have logically caused the Forest Service contract officer or on-site project manager to question the validity of implementing the project without the provisions for implementation of BMPs.

6. **Quantifying BMP implementation and effectiveness.** The BMPEP is typically a single evaluation completed shortly after the permanent BMPs are, or should have been, put in place. It is effectively a snapshot in time that captures the implementation and effectiveness of a given BMP at the moment that the evaluator inspects the site. Unfortunately, it does not evaluate situations like those described in the previous example where BMPs were not a part or project implementation.

The effectiveness rates were developed using only those sites where BMPs were implemented. Potential water quality impacts (or direct impacts) are not captured for sites where BMP implementation did not occur. In addition, the effectiveness rates are reflective of a single "snapshot in time" even though the Forest Service relies on BMPs as the management measure to prevent water quality problems for many years after installation. Because of the short time period between BMP implementation and subsequent BMP effectiveness evaluation, the BMPEP is evaluating the BMP at the optimal time. The BMPs should be re-evaluated after major storm events and years of use (e.g. water bars on dirt roads used as OHV trails) to determine the true effectiveness of the management measure over the long term. BMPs are designed to minimize the effect of non-point source pollution long after the individual projects are completed. In order for the analysis to provide a true understanding of the effectiveness of an individual BMP, follow up inspections that evaluate the BMP's long term durability and applicability are necessary.

7. **Selection of sites for effectiveness evaluation.** The Water Boards prefer a stratified approach to selecting sites for evaluating BMP effectiveness. For example, rather than, or in addition to, the current random selection process across all activities and locations, the Forest Service would identify the most challenging sites in terms of BMP implementation and effectiveness for any given activity. This stratified approach would ensure that a greater percentage of difficult sites are chosen each year. If the BMPs are evaluated from the sites that have the greatest potential to impact water quality, a better understanding of the BMP's effectiveness can be realized. This approach would allow for adaptive management to occur far sooner to improve those BMPs that are determined to be insufficient to protect water quality.

8. **Corrective action policy for sites where BMPs are ineffective or not implemented.** A policy should be developed that requires implementation of a corrective action plan for those situations where BMPEP monitors discover that BMPs were either not implemented or were implemented in an ineffective manner. Our experience has shown that once a contractor has completed a project it is difficult, if not impossible, for the Forest Service to require corrective action to mitigate for poor or non-existent BMP implementation. Therefore, some other mechanism is needed to ensure that identified problems are corrected. WE are cognizant of the debate over the cause of BMP failure (was it an inadequate design or poor installation). The Forest Service should consider requesting funding for a program that would address BMP maintenance/correction to address the annual findings of the BMPEP.

Review of the Report does not show that the BMPEP is being used as an adaptive management tool. The trend between the two different periods (1992-1997 and 1998-2002) described in Figure 5, page 12 in the Report indicates that there is little change in BMP implementation between the two time periods for most activities. It is particularly disconcerting to notice the discussion in the Report of the ongoing problems associated

with the engineering department's BMP compliance for stream crossings and near channel work. Due to the proximity of these areas to surface waters, these are project-types that should have a 100% implementation rate, rather than the stated approximately 85% rate. The implementation rate for recreation projects at 68% is also very troubling. The forest Service should develop a specific strategy to address these obvious problem areas.

Thank you for this opportunity to review the 2004 BMPEP Report. It is our hope that you will provide the leadership necessary to cause the Forest Service to utilize the information provided in the BMPEP and the Report to modify and supplement Forest Service programs resulting in improved water quality protections.

If you would like to discuss these comments or engage in discussions to improve upon the existing Forest Service programs for the benefit of water quality, please contact any one of us or our program managers at the respective Regional Water Boards.

Catherine Kuhlman
Executive Officer, North Coast Water Board

Pamela Creedon
Executive Officer, Central Valley Water Board

Harold Singer
Executive Officer, Lahontan Water Board

DMC/didT:/USFS BMPEP Monitoring Report critique letter
[File Under: USFS Gen Files]